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REMARKS

This paper is responsive to a non-final Office Action dated June 15, 2004. Claims 1-6, 8-23 and 26-30 were examined. Claims 1-6, 8-23, and 26-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,370,148 to Calvignac et al. By way of the present amendment, claim 17 is being cancelled.

Regarding claim 1, Applicants respectfully maintain that Calvignac, alone or in combination with other references of record, fails to teach or suggest

determining respective request priorities corresponding to respective requests for respective resources made by respective requesters, each request priority being determined according to at least a resource priority, resource priority being inversely related to a number of requests made for a particular resource,

as recited by claim 1. The Office Action admits, with reference to claims 1, 13, 15, 16, 17, 19, 23, and 27, that Calvignac fails to teach “assigning priority to each requested resource according [to] resource priority.” Applicants note that claim 1 recites determining “*request priorities*.” The Office Action says it would be obvious to assign priority according to resource priority as opposed to requester priority. Applicants respectfully maintain, that there is no suggestion or teaching to modify Calvignac to achieve the present invention. “When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.” B.F. Goodrich Co. V. Aircraft Braking Systems Corp., 37 USPQ2d 1314, 1319 (Fed. Cir. 1996); In re Kotzab, 55 USPQ2d 1313, 1316-1317 (Fed Cir. 2000). The Office Action relies on col. 6, lines 55-63 of Calvignac, which states:

It will be appreciated that many other priority schemes would be possible within the rearranger, include starting with the request with the greatest age or ordering by cell time. An important factor in the choice of such a scheme is that it must guarantee that a request cannot remain indefinitely in rearrangement matrix 340, consequently the algorithm must ensure that each request has a high probability of being eventually selected.

Applicants respectfully point out that changing from requester to resource priority would not achieve the stated goal of that portion of Calvignac of guaranteeing that a request will not be starved. As pointed out on page 7, lines 9-13 of the instant application, “[a]n additional

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factor to be considered in developing an arbitration scheme is to provide fairness in the sense of avoiding starvation for any particular request. Thus, a round robin scheme may be employed in addition to the arbiter prioritizing the requester with the fewest requests first." The Office action has pointed to no teaching in Calvignac (or elsewhere) that utilizing resource priority would ensure that each request has a high probability of eventually being selected. In fact, Calvignac states at col. 2, line 62 to col. 3 lines 4.

To avoid the possibility that a request remain indefinitely in the rearrangement storage, the priority mechanism in the rearranger is such as to guarantee that each request recorded in the rearrangement storage is eventually selected. This is achieved if the priority mechanism is based at least in part on the length of time any particular request has been stored in the rearrangement storage. In one embodiment, an age indicator associated with each request is stored with the request in the first storage means and the priority mechanism in the rearranger is based at least in part on the age indicator.

Thus, applicants respectfully submit that the suggestion or motivation to modify the teachings of Calvignac relied on by the Examiner does not in fact suggest modifying Calvignac to utilize resource priority. In fact, applicants respectfully submit, there is no motivation or suggestion to modify Calvignac to achieve the resource priority recited in claim 1, absent the teachings of the present invention.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of the ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations.

See MPEP § 2143. Merely stating that Calvignac can be modified to operate similarly to the claimed invention, without providing a prior art reference (or suitable suggestions to modify Calvignac) that teaches or suggests the claimed invention, is not sufficient to establish *prima facie* obviousness. See MPEP §2143.01. Accordingly, applicants respectfully submit that the Office action has failed to establish a *prima facie* case of obviousness and that claim 1, and all claims dependent thereon are patentable over the art of record.

With respect to claim 13, the Office Action admits, with reference to claims 1, 13, 15, 16, 17, 19, 23, and 27, that Calvignac fails to teach "assigning priority to each requested resource

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according to resource priority." For reasons stated above, applicants respectfully submit that Calvignac, alone or in combination with other references of record, fails to teach or suggest *allocating respective resources to respective requesters according to priorities determined by at least a number of requests directed to each of the resources as claimed.* Accordingly, applicants submit that claim 13, and all claims dependent thereon are patentable over the art of record.

With respect to claim 15, the Office Action admits, with reference to claims 1, 13, 15, 16, 17, 19, 23, and 27, that Calvignac fails to teach "assigning priority to each requested resource according to resource priority." For reasons stated above, applicants respectfully submit that Calvignac, alone or in combination with other references of record, fails to teach or suggest *means for determining resource priority according to a number of requests made for the respective resources, the respective resource priorities being inversely related to the number of requests made for the respective resource.* Accordingly, applicants submit that claim 15, and all claims dependent thereon are patentable over the art of record.

With respect to claim 19, the Office Action admits, with reference to claims 1, 13, 15, 16, 17, 19, 23, and 27, that Calvignac fails to teach "assigning priority to each requested resource according to resource priority." For reasons stated above, applicants respectfully submit that Calvignac, alone or in combination with other references of record, fails to teach or suggest *an arbiter coupled to receive a plurality of requests from the requesters, each of the requests requesting at least one of the resources, the arbiter allocating resources to requesters according to at least a resource priority, the resource priority being inversely related to a number of requests directed to respective resources.* Accordingly, applicants submit that claim 19, and all claims dependent thereon are patentable over the art of record.

With respect to claim 23, the Office Action admits, with reference to claims 1, 13, 15, 16, 17, 19, 23, and 27, that Calvignac fails to teach "assigning priority to each requested resource according to resource priority." For reasons stated above, applicants respectfully submit that Calvignac, alone or in combination with other references of record, fails to teach or suggest *allocating resources among the requesters as a function of a number of requests made, wherein the function of the number of requests utilizes, at least in part, how many requests made for each*

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resource. Accordingly, applicants submit that claim 23, and all claims dependent thereon are patentable over the art of record.

Regarding claim 27, Applicants respectfully maintain that Calvignac, alone or in combination with other references of record, fails to teach or suggest, for the reasons stated above with relation to claim 1, *code executable to allocate respective resources to respective requesters according to priorities determined by at least a number of requests directed to each of the resources*. Accordingly, applicants submit that claim 27, and all claims dependent thereon are patentable over the art of record.

With respect to claims 9 and 26 the Office admits that Calvignac does not disclose combining resource priority with requester priority, but states it would have been obvious to do so providing the motivation to do so would be to maximize the number of input/output connections. The applicants respectfully submit that the generalized motivation provided by the Office Action fails to meet requirements for a motivation or suggestion to modify the teachings of that reference to achieve the claimed invention. As stated in MPEP §2143.01, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” There is no teaching, absent the present invention, that suggests the desirability of modifying Calvignac to combine *resource priority and a requester priority to generate an assigned priority for each combined requester and resource priority*, as recited in claim 9, nor to use a *combination of how many requests made for each resource and how many requests are made by each requester* as recited in claim 26. Accordingly, applicants submit that claims 9 and 26 distinguish over Calvignac for these additional reasons.

In summary, claims 1-6, 8-16, 18-23 and 26-30 are in the case. All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,

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